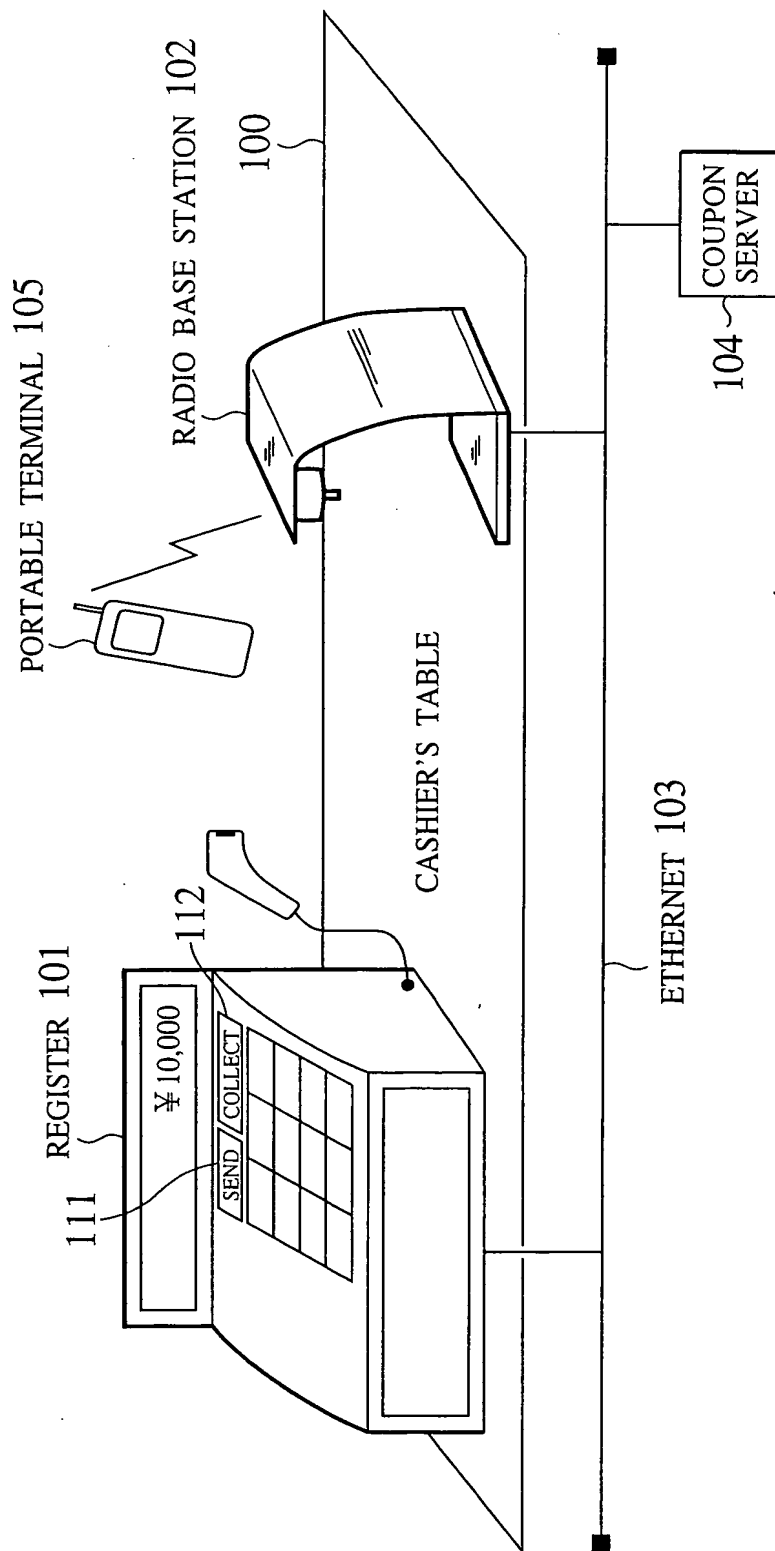
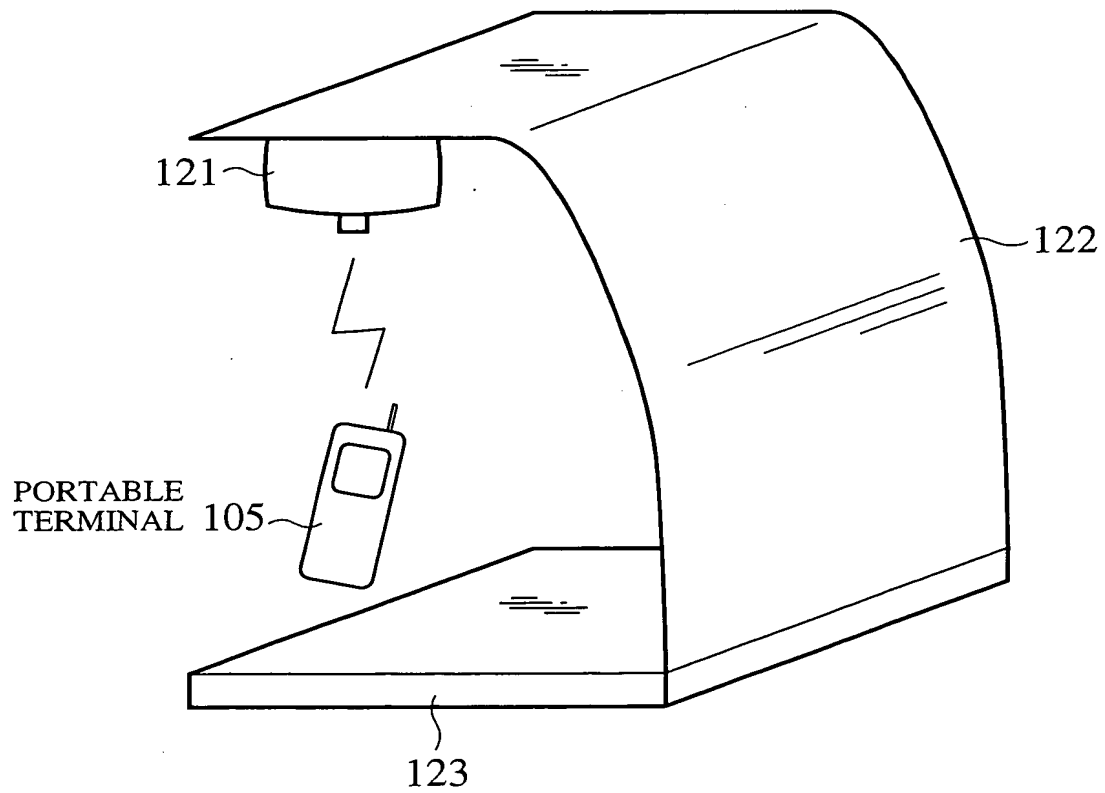


FIG. 1



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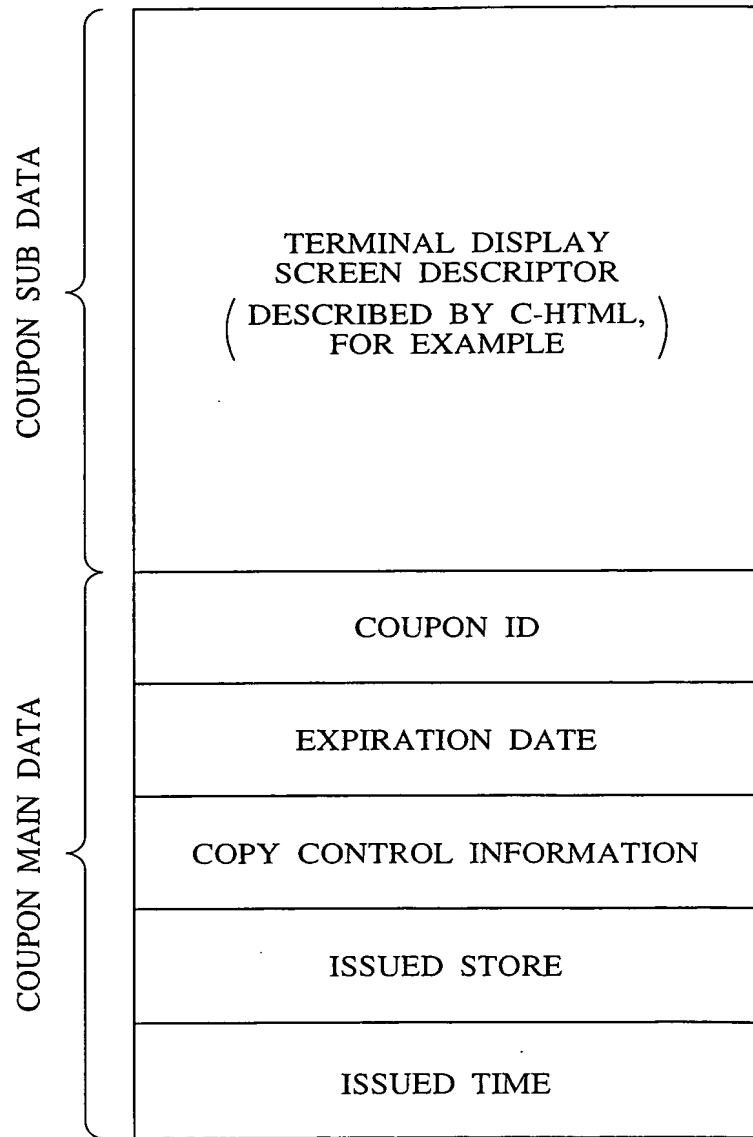
FIG.2



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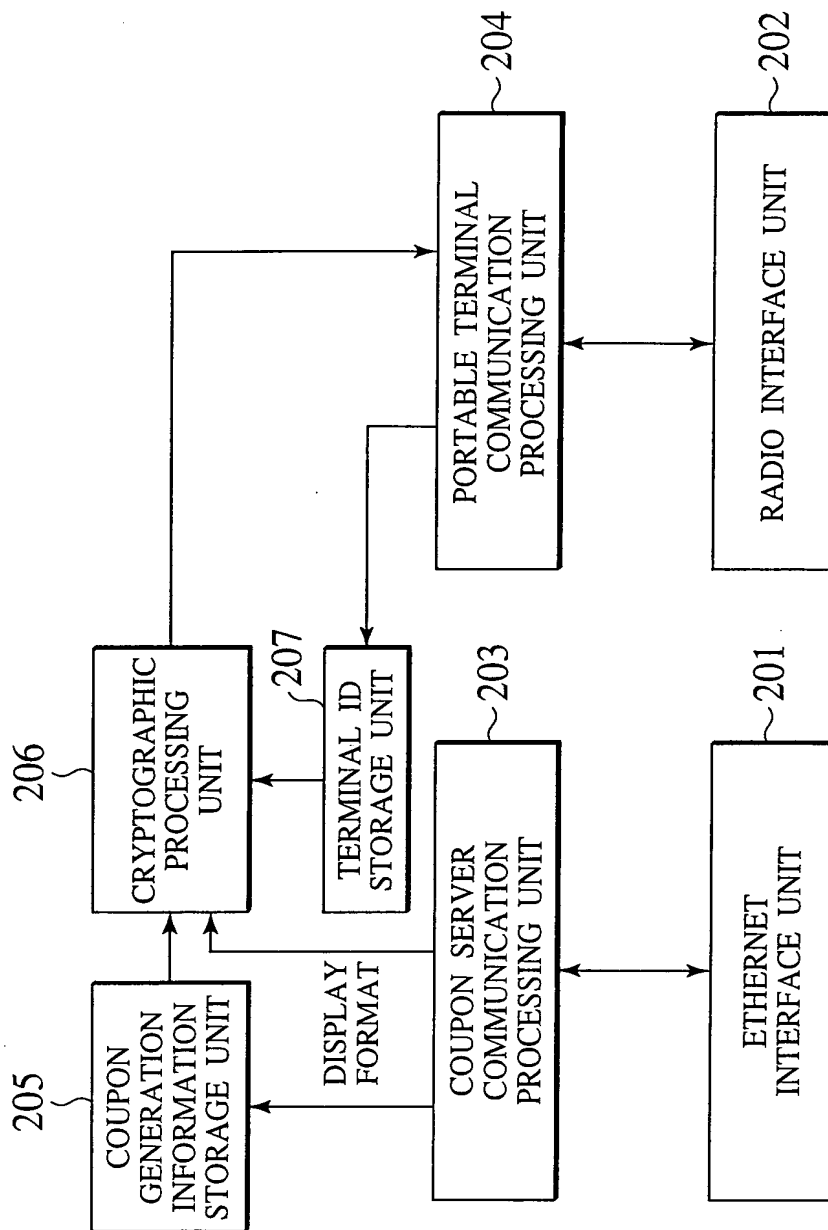
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FIG.3



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FIG. 4



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FIG.5

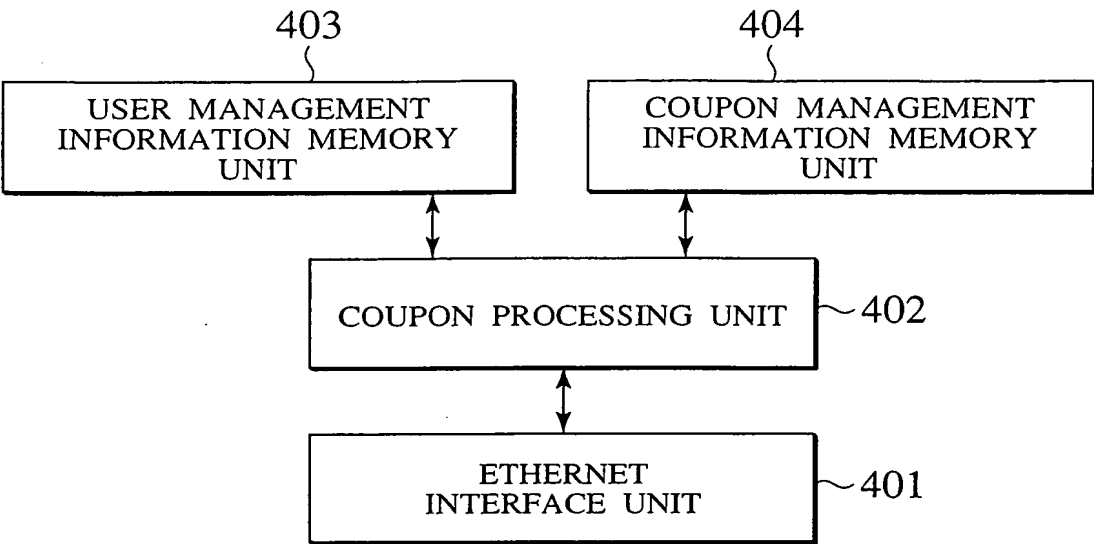


FIG.6

USER ID	USER ATTRIBUTE INFORMATION	TERMINAL ID	SERVICE INFORMATION
⋮	⋮	⋮	⋮

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FIG.7

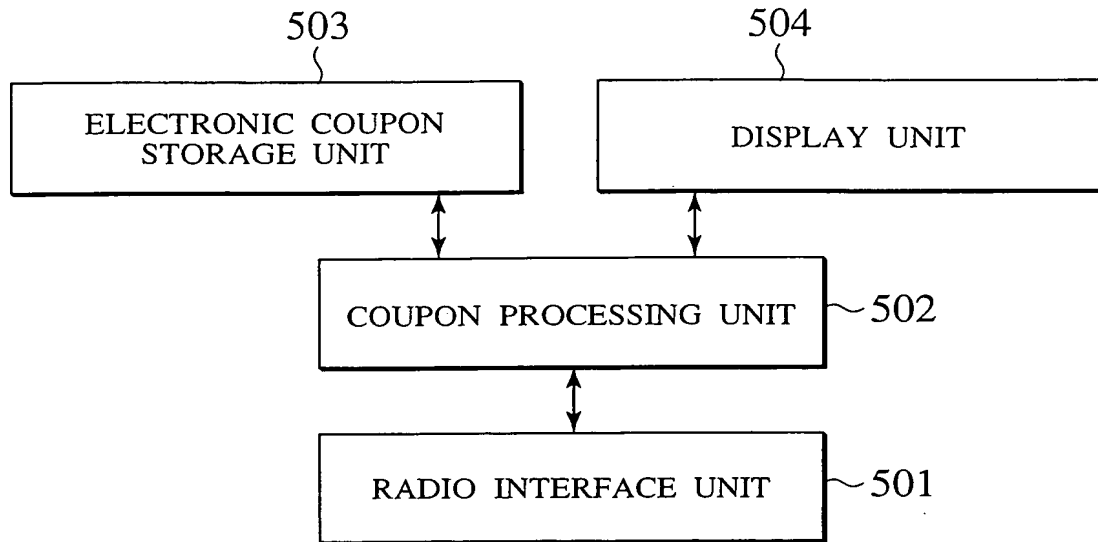
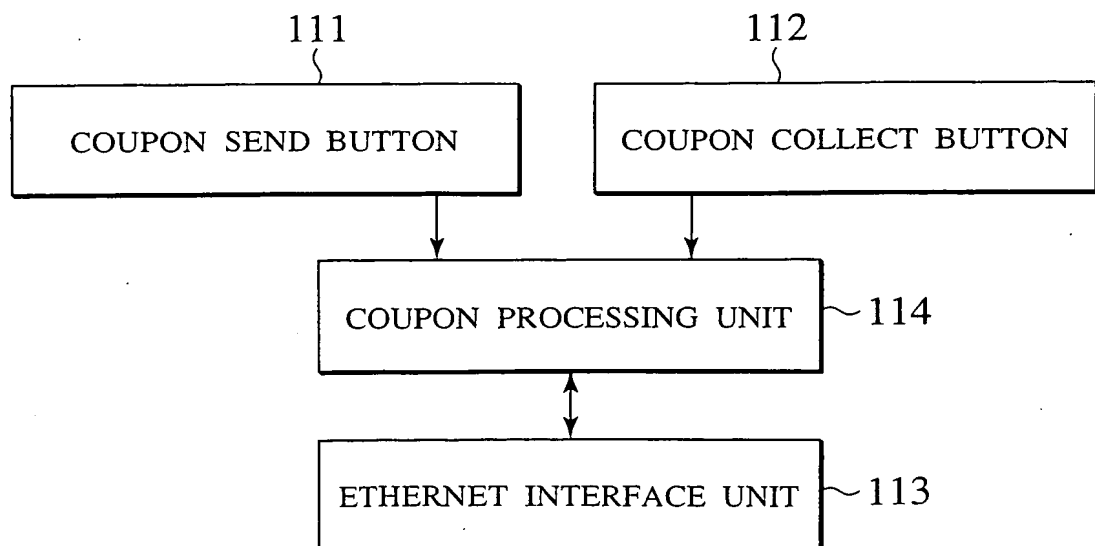
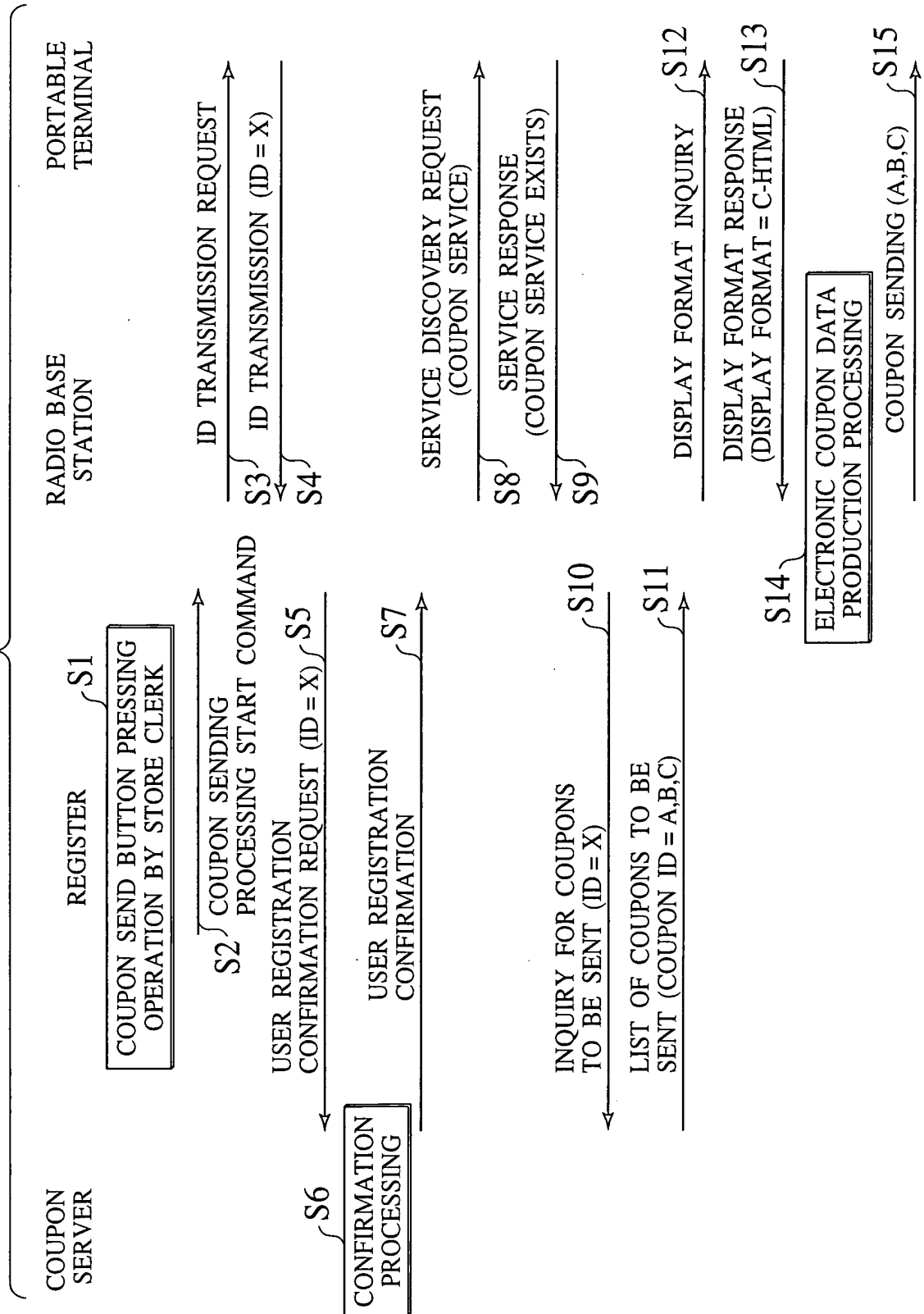


FIG.8



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FIG. 9



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FIG.10A

COUPON (P)
SIGNATURE FOR ABOVE COUPON (e.g. $[f(p)]K_p$)

FIG.10B

COUPON (P)
SIGNATURE FOR ABOVE COUPON (e.g. $[f(p), x]K_p$)

09/23/14, 02:02:01
T02020" T6E2260

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FIG.11

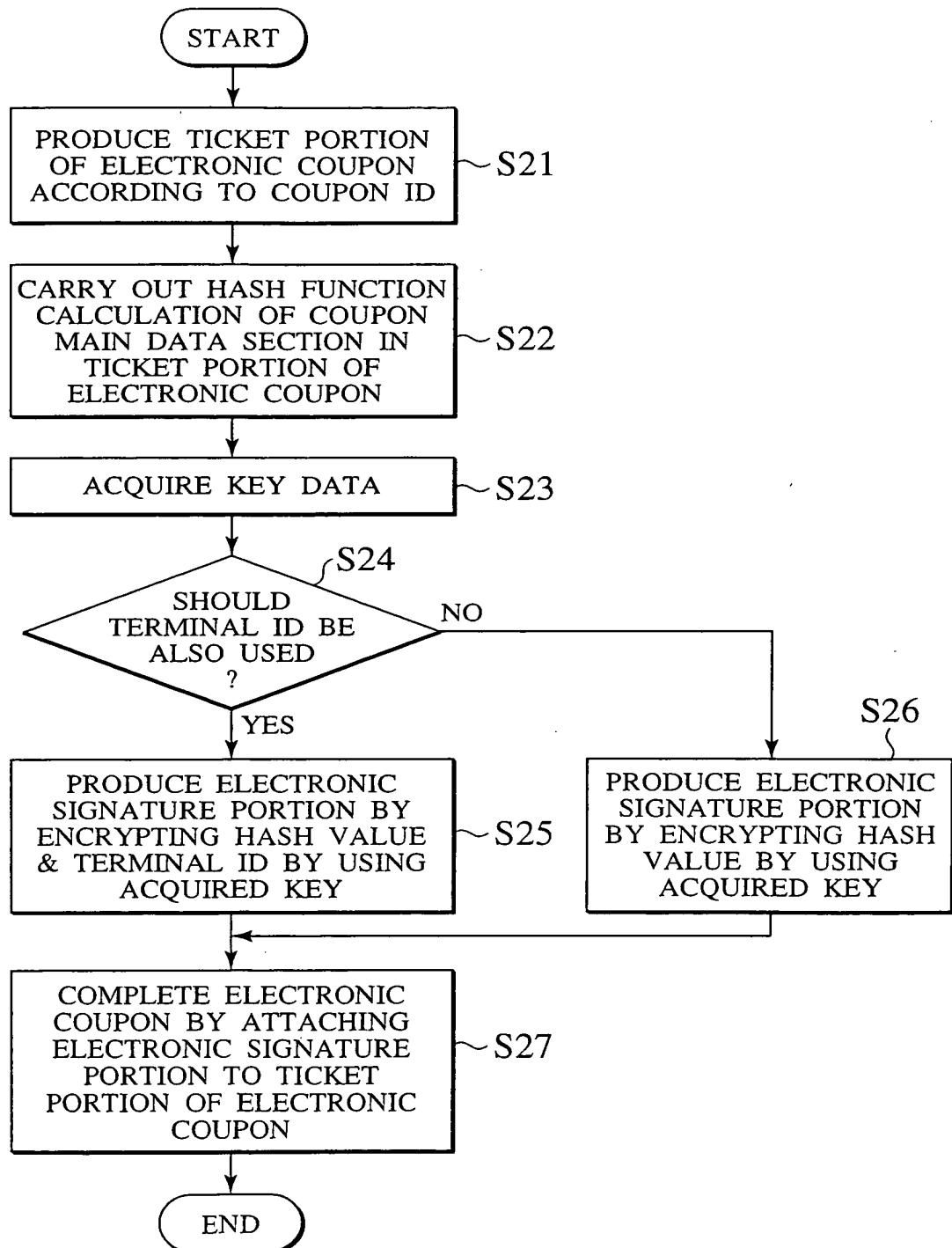
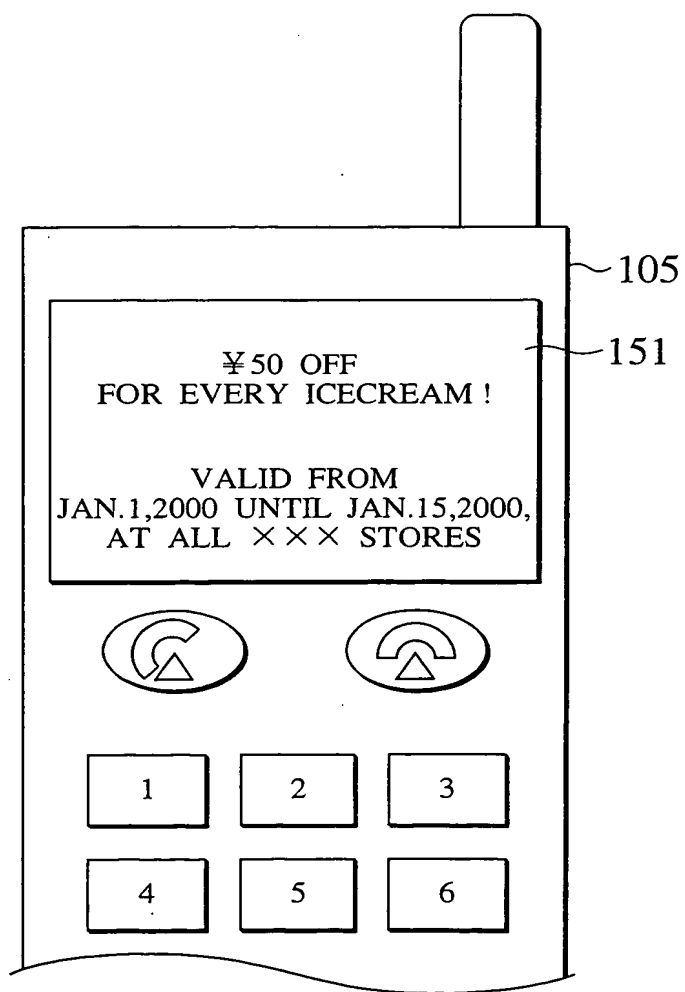


FIG. 11

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FIG.12



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FIG.13

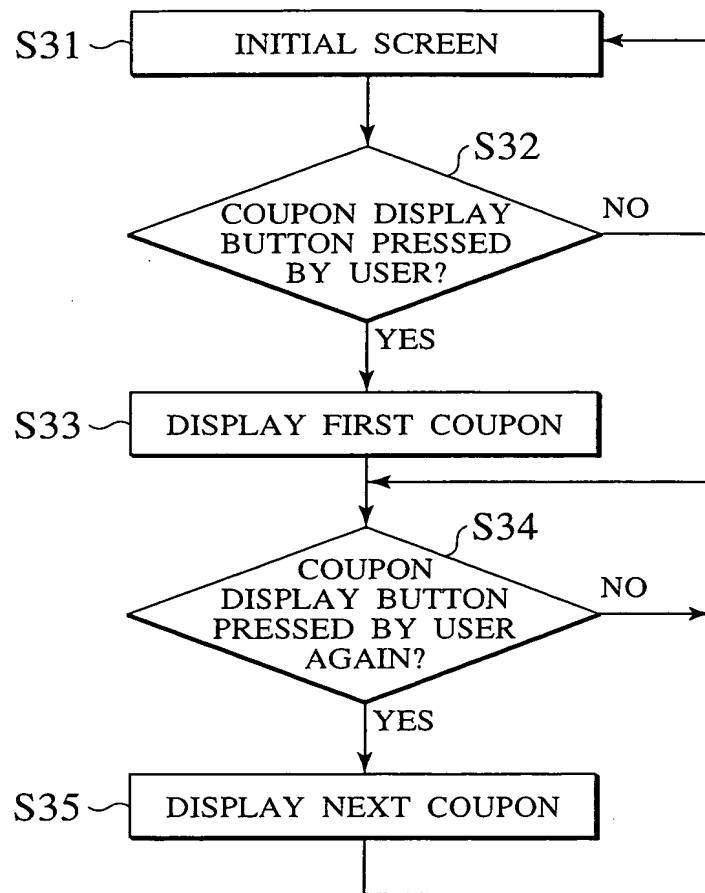


FIG. 13

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FIG.14

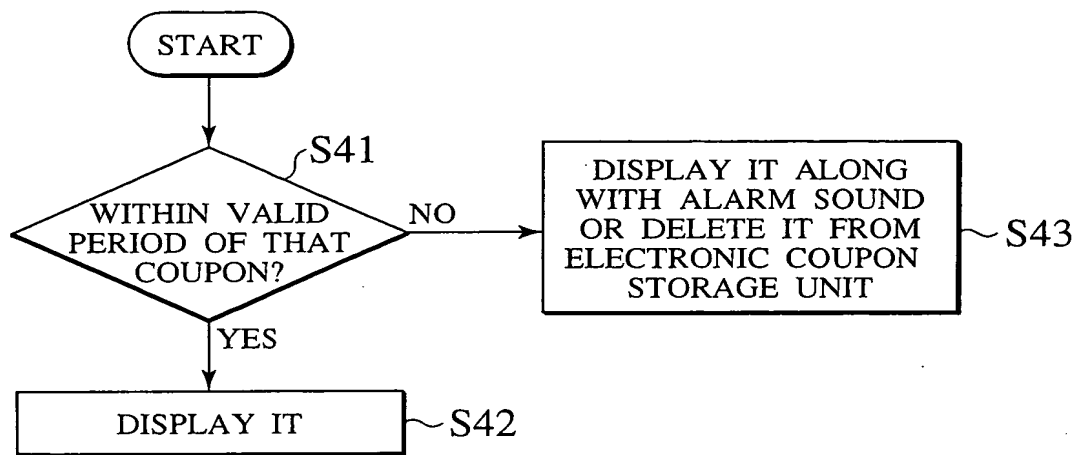
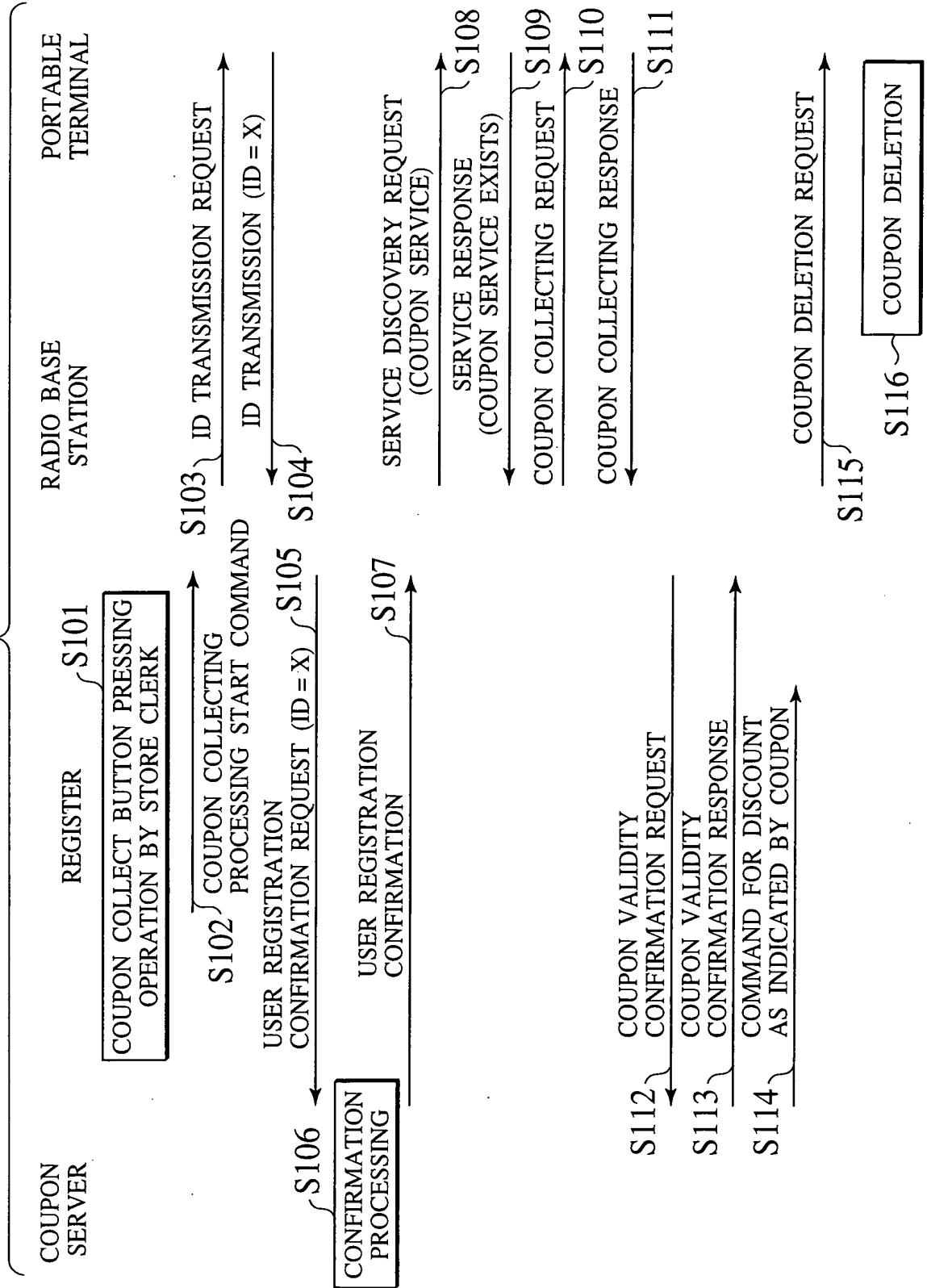


FIG. 14

FIG.15



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FIG.16

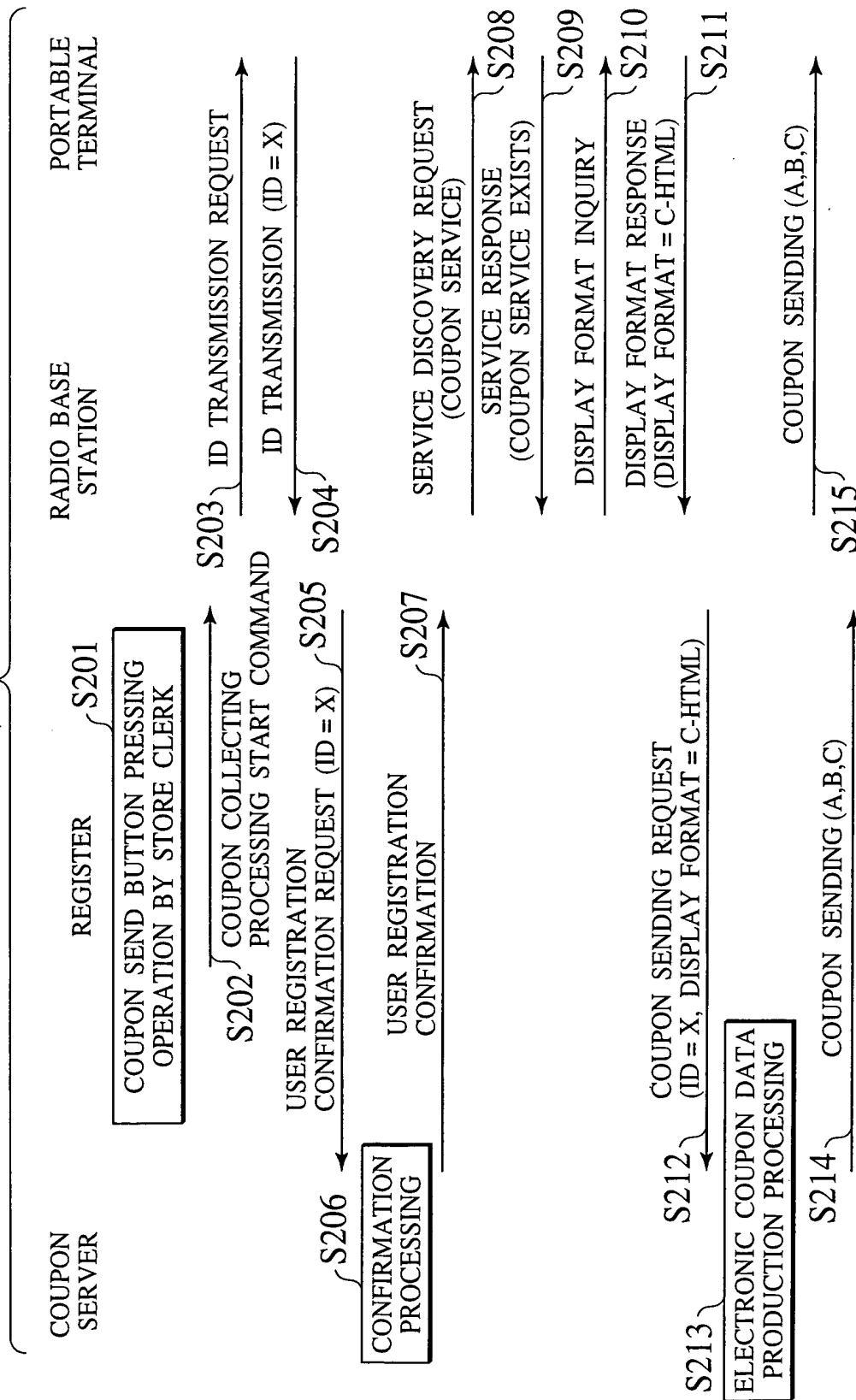


FIG.17

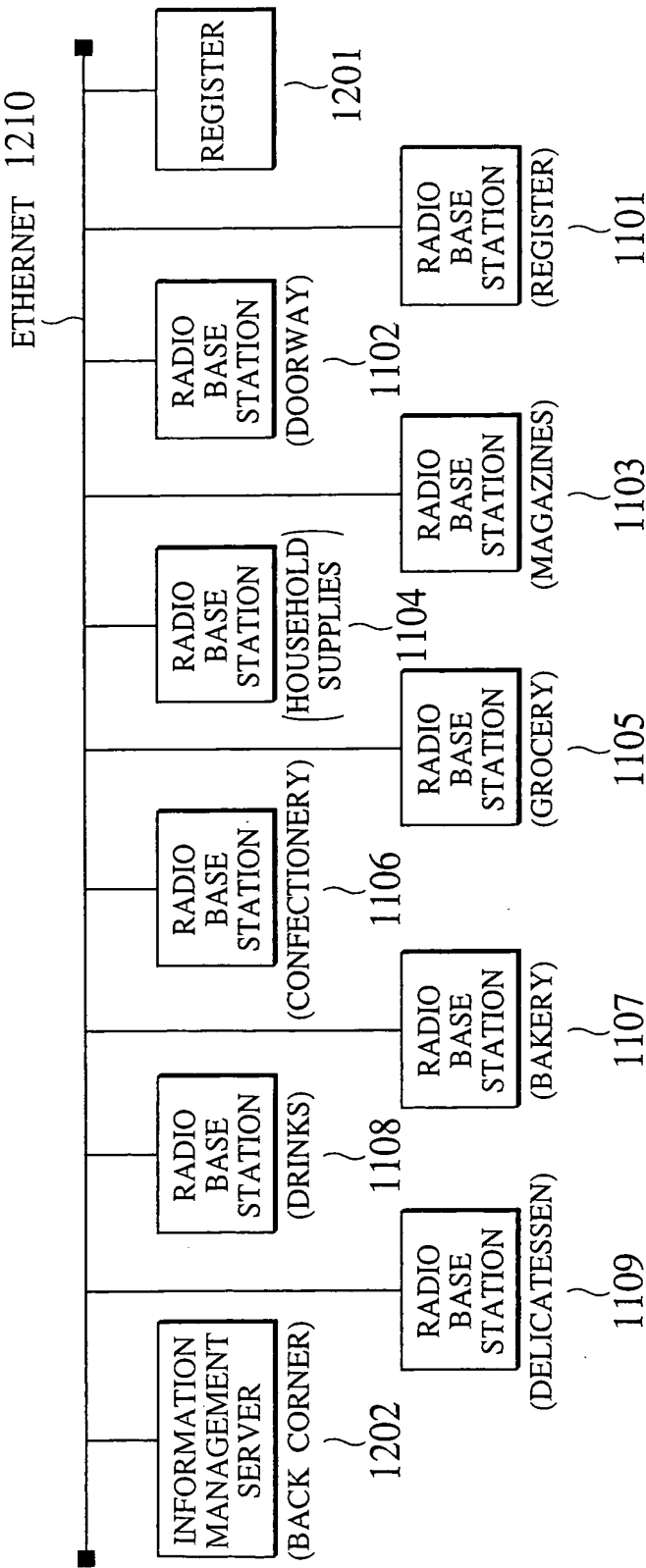
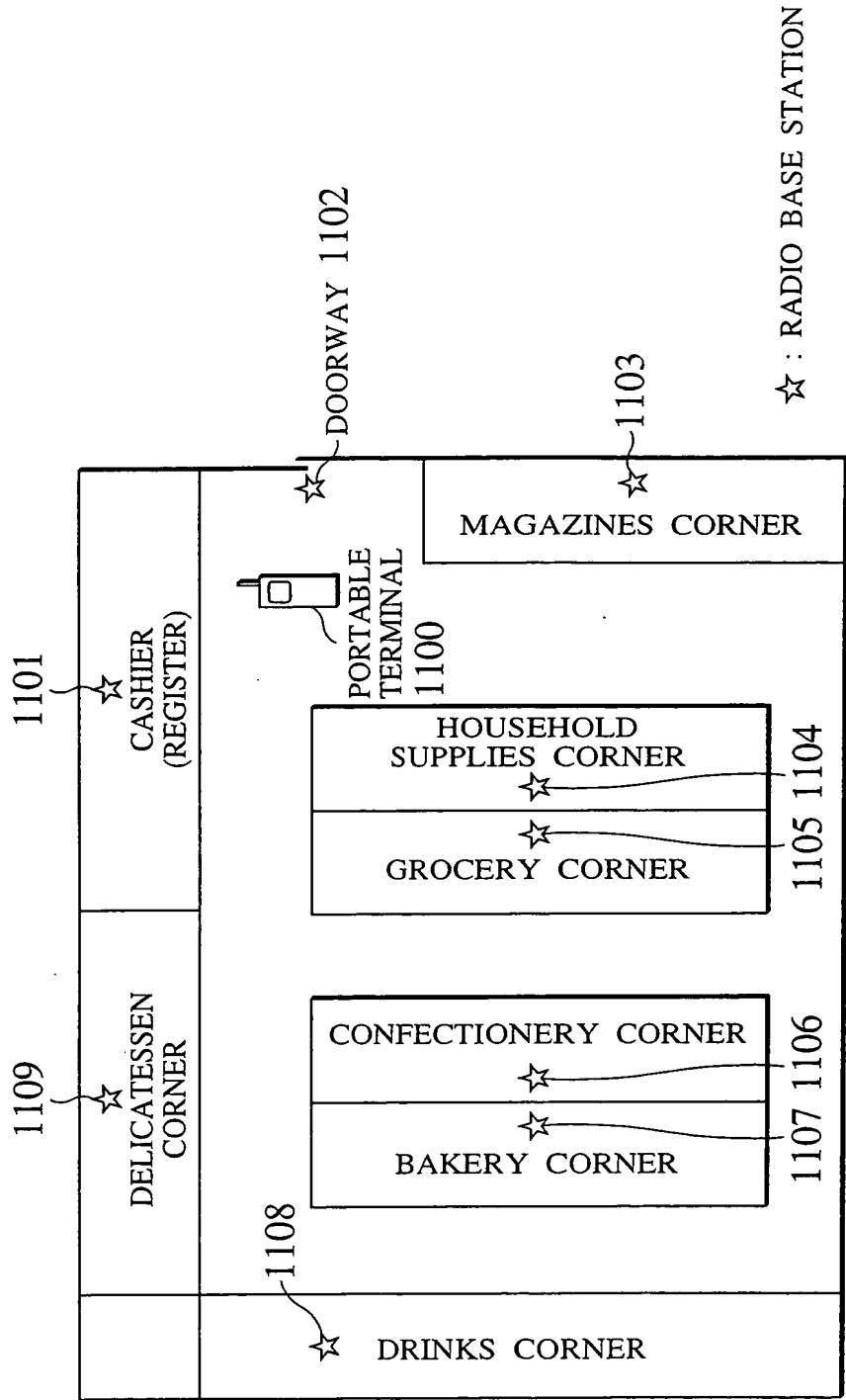
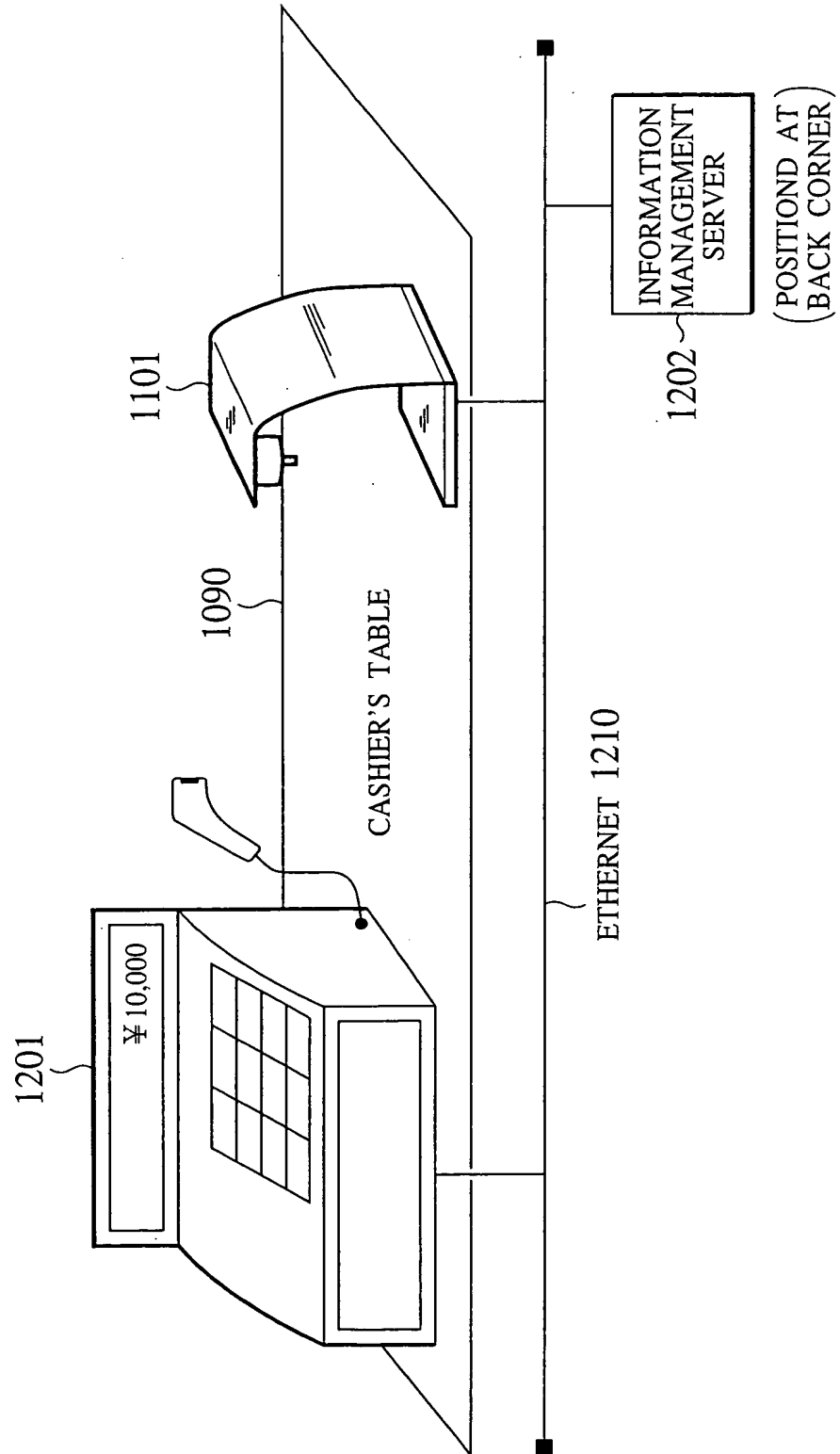


FIG.18



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FIG. 19



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FIG.20

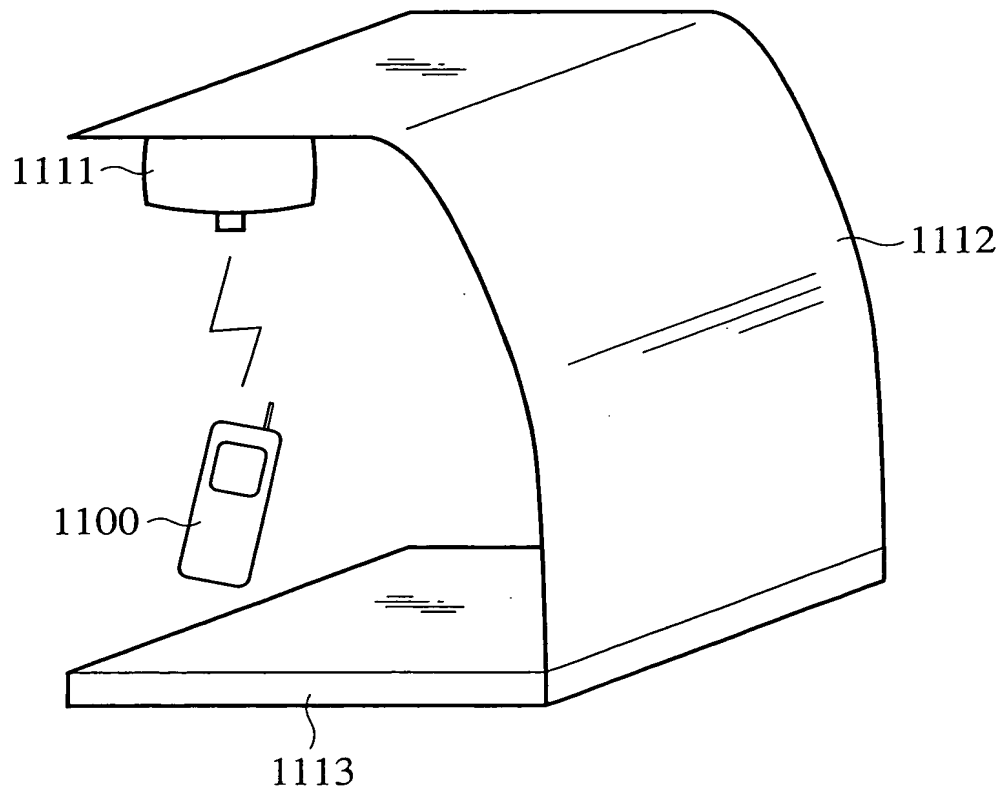
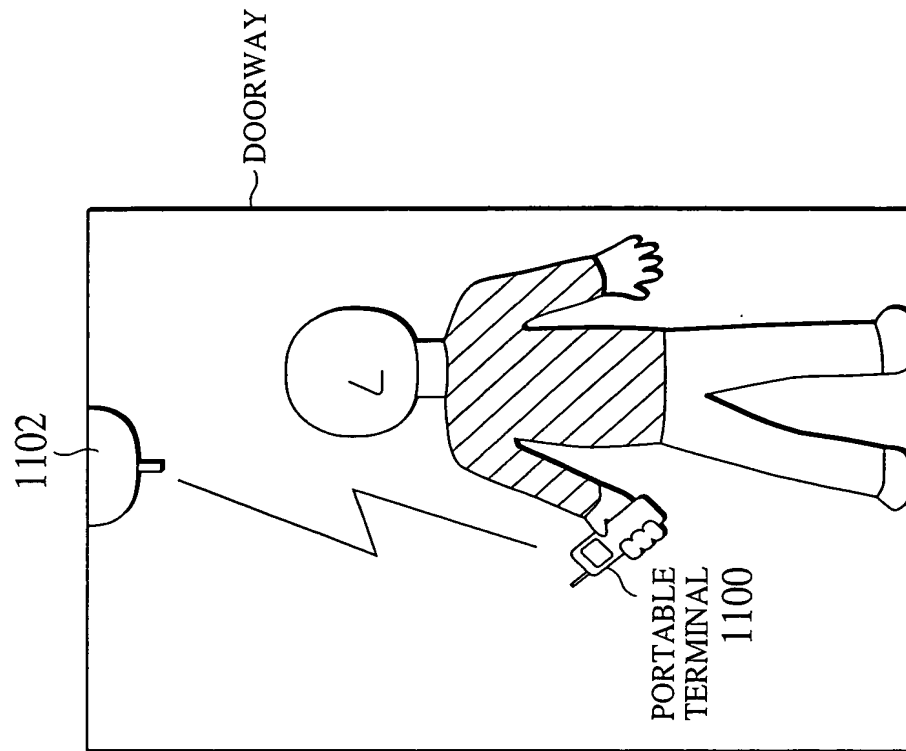


FIG. 20

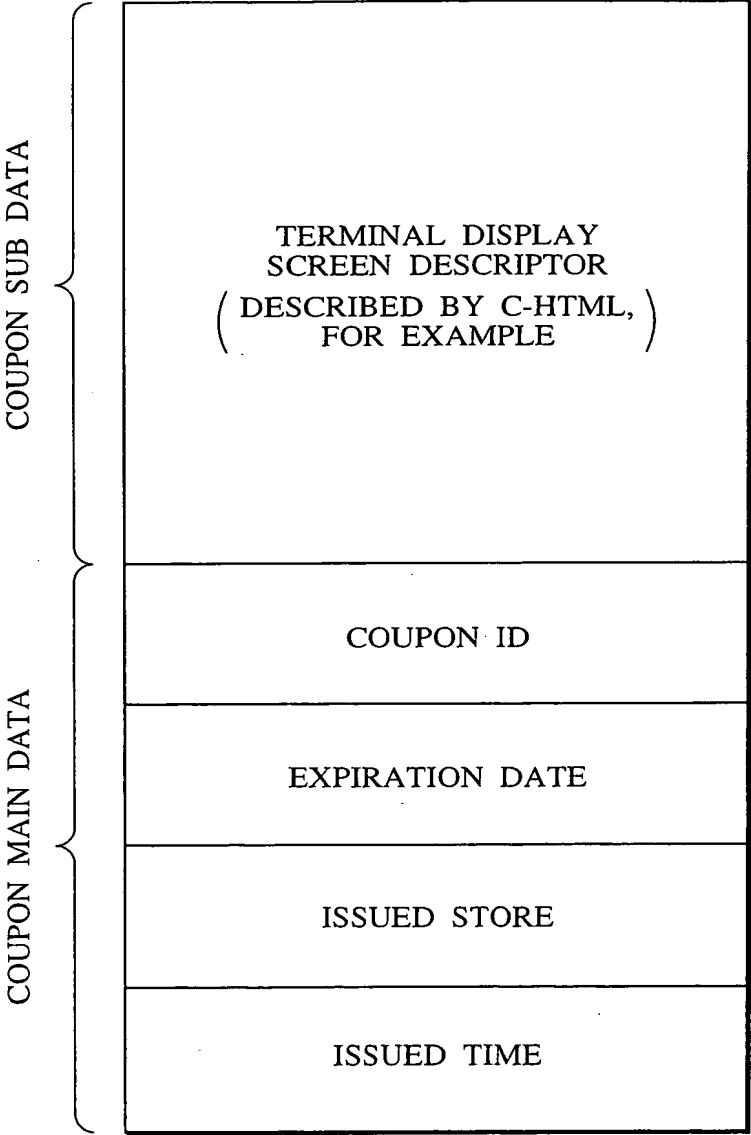
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FIG. 21



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FIG.22

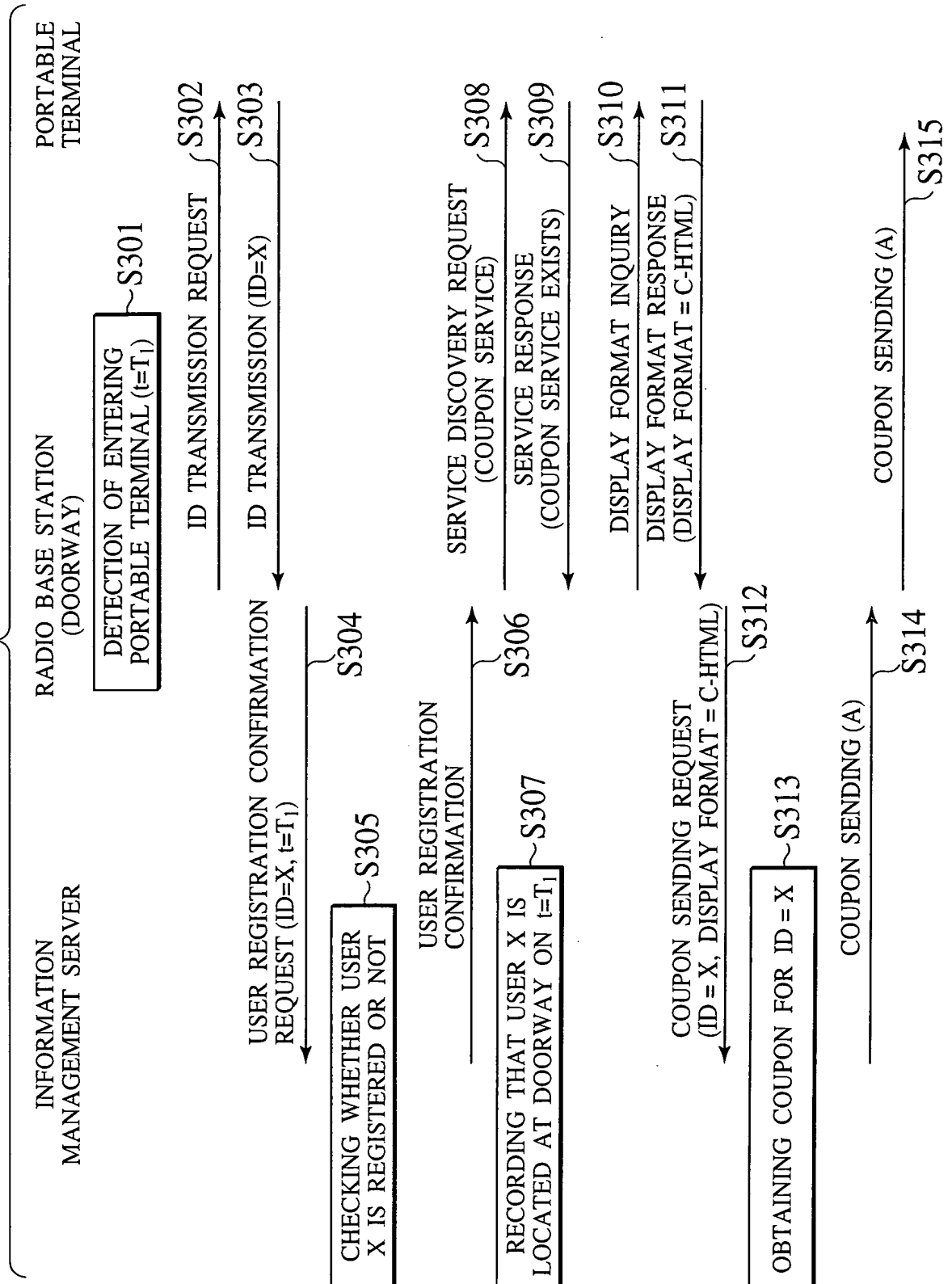


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FIG.23

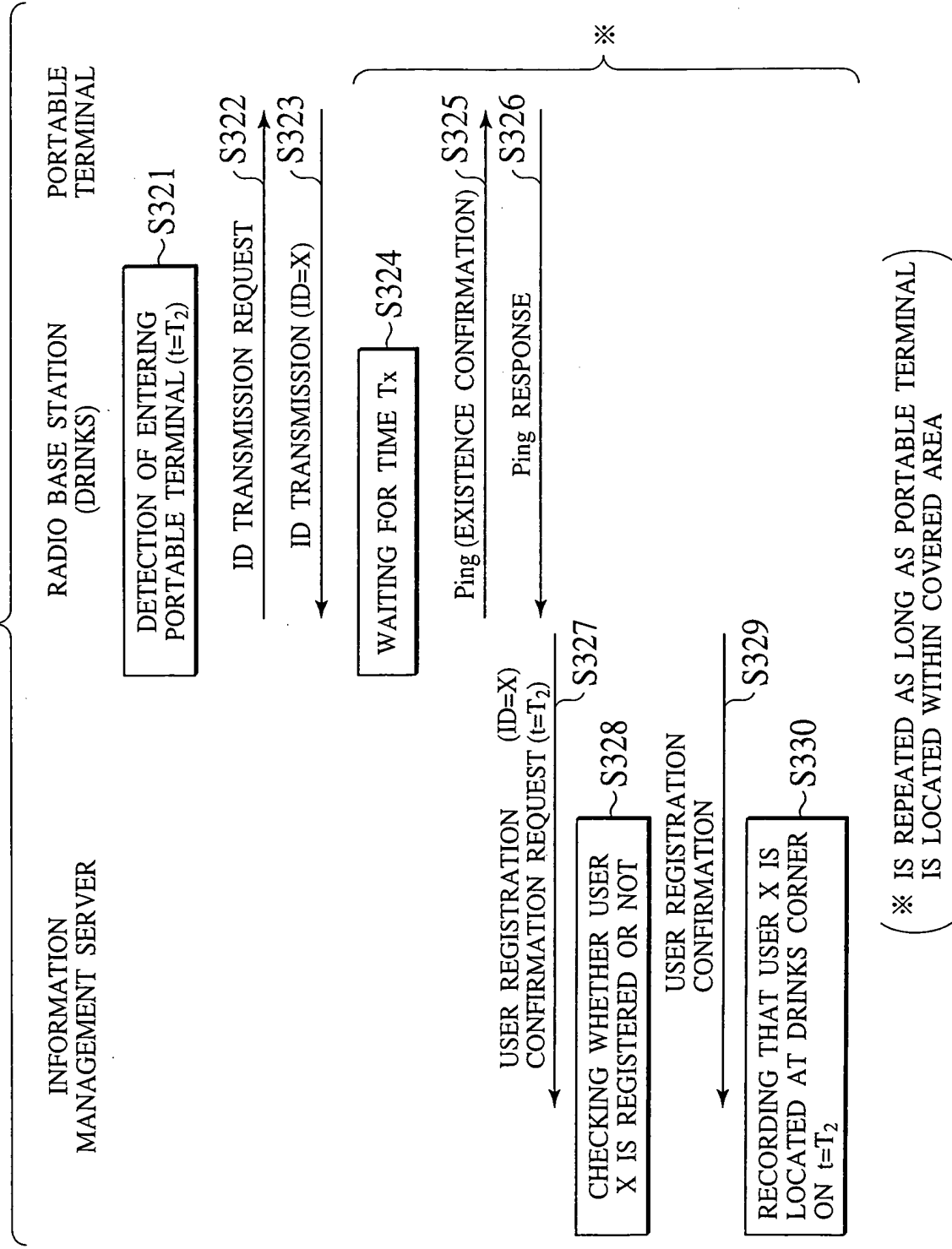
TERMINAL ID	USER ATTRIBUTE INFORMATION (NAME, ADDRESS, AGE, SEX, ETC.)	TIME	PLACE	IDS OF SENT/COLLECTED COUPONS	PURCHASED ITEM
×	GEORGE BUSH 2001 42ND ST., MANHATTAN 30, MALE	T ₁	DOORWAY	A(SENT)	
		T ₂	DRINKS		
		T ₂ + α	DRINKS		
		T ₂ +2 α	DRINKS		
		T ₃	REGISTER	B(COLLECTED)	××CORP. OOLONG TEA

FIG. 24



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FIG.25



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FIG.26

